

Supplementary Table 1. Measurements of crustal thickness, Vp/Vs ratio and crustal anisotropy parameters in the study area.

TB	Station	Longitude	Latitude	$H(\text{km})$	κ	$\varphi(^{\circ})$	$\delta t(\text{s})$
NCB	ST11	117.04	31.75	33.5 $\pm$ 1.5	1.72 $\pm$ 0.05	140 $\pm$ 15	0.15 $\pm$ 0.04
	ST12	117.12	31.66	32.0 $\pm$ 1.8	1.79 $\pm$ 0.06	70 $\pm$ 25	0.10 $\pm$ 0.10
	ST13	117.21	31.57	32.0 $\pm$ 1.7	1.84 $\pm$ 0.06	0 $\pm$ 10	0.45 $\pm$ 0.05
	ST14	117.30	31.47	32.6 $\pm$ 1.5	1.77 $\pm$ 0.05	60 $\pm$ 10	0.25 $\pm$ 0.05
	ST15	117.40	31.36	30.5 $\pm$ 2.0	1.88 $\pm$ 0.07	10 $\pm$ 10	0.25 $\pm$ 0.06
	AH.HEF	117.04	31.75	33.5 $\pm$ 1.7	1.76 $\pm$ 0.05	120 $\pm$ 6	0.20 $\pm$ 0.06
	AH.BAS	117.33	31.44	32.1 $\pm$ 1.9	1.76 $\pm$ 0.05	0 $\pm$ 25	0.10 $\pm$ 0.10
	AH.LAN	116.50	31.72	34.9 $\pm$ 2.0	1.73 $\pm$ 0.05	120 $\pm$ 5	0.30 $\pm$ 0.03
	AH.SCH	116.98	31.35	34.4 $\pm$ 1.7	1.76 $\pm$ 0.05	85 $\pm$ 10	0.40 $\pm$ 0.09
	HN05	115.78	32.06	34.0 $\pm$ 2.8	1.73 $\pm$ 0.08	155 $\pm$ 20	0.30 $\pm$ 0.10
QDOB	HN04	115.13	32.07	33.1 $\pm$ 2.1	1.75 $\pm$ 0.08	-	-
	HA.SC	115.42	31.79	33.1 $\pm$ 2.9	1.74 $\pm$ 0.08	25 $\pm$ 15	0.20 $\pm$ 0.12
	AH.FZL	116.27	31.35	36.5 $\pm$ 2.3	1.78 $\pm$ 0.06	90 $\pm$ 10	0.25 $\pm$ 0.04
	AH.JZA	115.88	31.69	36.4 $\pm$ 2.0	1.70 $\pm$ 0.05	75 $\pm$ 0	0.05 $\pm$ 0.00
	AH.SJH	116.09	31.44	36.4 $\pm$ 1.9	1.79 $\pm$ 0.05	90 $\pm$ 5	0.55 $\pm$ 0.10
	C034	116.39	30.62	34.4 $\pm$ 2.7	1.69 $\pm$ 0.08	150 $\pm$ 20	0.15 $\pm$ 0.10
	ah211	116.29	31.12	37.5 $\pm$ 2.6	1.79 $\pm$ 0.07	20 $\pm$ 15	0.20 $\pm$ 0.02
	ah217	116.94	31.05	34.1 $\pm$ 2.4	1.72 $\pm$ 0.06	140 $\pm$ 25	0.25 $\pm$ 0.10
	ah216	116.24	30.46	36.6 $\pm$ 3.1	1.66 $\pm$ 0.08	-	-
	C019	116.09	30.28	36.6 $\pm$ 3.1	1.73 $\pm$ 0.12	-	-
LYB	HN15	115.54	31.13	36.5 $\pm$ 3.0	1.73 $\pm$ 0.08	-	-
	C033	116.57	30.38	29.6 $\pm$ 2.4	1.69 $\pm$ 0.07	140 $\pm$ 18	0.20 $\pm$ 0.02
	C032	116.74	30.16	30.7 $\pm$ 2.9	1.73 $\pm$ 0.08	135 $\pm$ 10	0.75 $\pm$ 0.12
	C031	116.81	30.01	32.5 $\pm$ 2.4	1.73 $\pm$ 0.06	25 $\pm$ 15	0.35 $\pm$ 0.12
	C030	116.90	29.94	35.1 $\pm$ 3.0	1.68 $\pm$ 0.09	-	-
	C029	116.93	29.81	34.9 $\pm$ 1.8	1.69 $\pm$ 0.06	35 $\pm$ 15	0.30 $\pm$ 0.12
	ST16	117.48	31.28	32.5 $\pm$ 1.8	1.77 $\pm$ 0.06	40 $\pm$ 5	0.30 $\pm$ 0.02
	ST17	117.59	31.16	31.4 $\pm$ 2.0	1.78 $\pm$ 0.06	10 $\pm$ 5	0.45 $\pm$ 0.06
	ST18	117.69	31.05	30.5 $\pm$ 1.7	1.82 $\pm$ 0.06	40 $\pm$ 8	0.65 $\pm$ 0.06
	AH.TOL	117.81	30.92	31.6 $\pm$ 2.1	1.77 $\pm$ 0.06	20 $\pm$ 8	0.25 $\pm$ 0.06
	ST19	117.85	30.88	32.5 $\pm$ 1.5	1.70 $\pm$ 0.04	70 $\pm$ 6	0.45 $\pm$ 0.04
	ST20	117.90	30.82	32.4 $\pm$ 1.9	1.73 $\pm$ 0.05	65 $\pm$ 8	0.50 $\pm$ 0.10
	ST21	118.04	30.67	33.5 $\pm$ 2.3	1.75 $\pm$ 0.06	70 $\pm$ 12	0.25 $\pm$ 0.10
	ST22	118.14	30.56	32.5 $\pm$ 2.1	1.72 $\pm$ 0.06	70 $\pm$ 10	0.60 $\pm$ 0.15
	ST23	118.21	30.48	32.6 $\pm$ 2.1	1.71 $\pm$ 0.06	90 $\pm$ 25	0.10 $\pm$ 0.10
	ST24	118.28	30.40	32.5 $\pm$ 1.7	1.74 $\pm$ 0.05	60 $\pm$ 8	0.20 $\pm$ 0.06
	C035	117.34	30.14	34.1 $\pm$ 2.3	1.70 $\pm$ 0.06	150 $\pm$ 12	0.45 $\pm$ 0.12
	ah203	118.23	31.47	28.6 $\pm$ 3.0	1.77 $\pm$ 0.10	-	-
	ah209	118.17	31.08	32.0 $\pm$ 2.4	1.77 $\pm$ 0.08	-	-
	JS.NJ	118.85	32.05	28.0 $\pm$ 2.1	1.78 $\pm$ 0.06	50 $\pm$ 12	0.30 $\pm$ 0.04

	AH.ANQ	117.02	30.58	30.9±2.5	1.76±0.13	30±15	0.10±0.05
	AH.CHZ	118.28	32.29	28.4±2.1	1.72±0.09	35±15	0.20±0.05
	AH.JAS	118.26	32.81	29.9±1.1	1.77±0.06	65±5	0.25±0.02
	AH.MAS	118.57	31.69	29.6±1.6	1.76±0.05	25±10	0.40±0.05
	AH.HSH	118.06	31.77	30.9±2.1	1.78±0.06	-	-
	AH.JIX	118.38	30.70	34.1±2.8	1.71±0.08	-	-
	ah212	117.39	30.87	31.5±3.0	1.73±0.12	-	-
	C036	117.92	30.42	34.5±2.4	1.67±0.07	-	-
JOB	C028	117.06	29.67	34.9±1.4	1.70±0.05	35±15	0.20±0.02
	C027	117.16	29.59	34.9±1.7	1.67±0.05	25±10	0.20±0.14
	C026	117.24	29.47	32.6±1.7	1.69±0.05	80±12	0.50±0.14
	C025	117.33	29.35	32.0±2.2	1.63±0.05	-	-
	C024	117.41	29.26	31.1±1.9	1.73±0.06	70±10	0.95±0.12
	C084	117.56	29.10	32.0±2.9	1.75±0.09	30±18	0.30±0.08
	C083	117.65	28.95	33.5±2.0	1.72±0.06	65±10	0.40±0.10
	C082	117.69	28.84	33.4±2.8	1.71±0.07	120±10	0.55±0.07
	C081	117.80	28.73	35.4±2.8	1.70±0.07	-	-
	C080	117.87	28.60	33.9±2.0	1.74±0.05	120±15	0.25±0.12
	C079	117.95	28.51	34.1±2.3	1.69±0.06	170±10	0.40±0.14
	C078	118.04	28.37	32.0±2.2	1.79±0.07	90±15	0.80±0.14
	C077	118.05	28.26	32.5±2.0	1.74±0.06	80±5	0.85±0.14
	ST25	118.40	30.29	32.5±2.9	1.75±0.07	-	-
	ST26	118.49	30.18	34.1±1.9	1.70±0.05	40±10	0.25±0.08
	ST27	118.57	30.09	33.5±3.0	1.71±0.09	80±25	0.10±0.10
	ST28	118.65	30.00	33.9±2.2	1.77±0.07	40±8	0.50±0.08
	ST29	118.75	29.89	34.4±2.3	1.73±0.06	0±10	0.35±0.10
	ST30	118.82	29.79	30.6±0.8	1.76±0.01	-	-
	ST31	118.92	29.70	34.0±2.2	1.77±0.06	70±10	0.30±0.10
	ST32	119.03	29.58	32.5±2.3	1.78±0.07	60±13	0.20±0.10
	ST33	119.12	29.48	36.0±0.5	1.73±0.01	80±8	0.65±0.12
	ST34	119.20	29.40	34.6±2.7	1.73±0.06	90±25	0.10±0.10
	ST35	119.29	29.29	35.1±1.9	1.74±0.05	55±8	0.70±0.08
	ST36	119.38	29.20	34.9±2.3	1.72±0.06	100±20	0.25±0.15
	ST37	119.46	29.11	33.0±2.6	1.80±0.07	170±25	0.15±0.10
	ST38	119.55	29.01	32.5±2.3	1.76±0.06	115±15	0.05±0.12
	C041	117.90	29.28	31.6±3.0	1.71±0.08	85±10	0.35±0.20
	C053	118.42	28.92	35.4±2.8	1.70±0.10	75±12	0.55±0.15
	C038	117.96	30.09	33.4±1.9	1.77±0.06	175±30	0.75±0.25
	C052	118.93	29.15	33.9±2.1	1.73±0.05	100±10	0.20±0.05
	AH.HUS	118.38	29.71	34.0±2.3	1.71±0.06	50±10	0.25±0.06
	ZJ.WXJ	118.83	28.70	33.1±1.6	1.75±0.04	75±15	0.25±0.04
	ZJ.CHA	118.41	29.47	34.0±3.0	1.73±0.09	-	-
	C037	117.58	29.73	34.6±2.3	1.69±0.07	-	-
	C051	118.23	29.13	35.0±3.0	1.69±0.09	-	-

CB	C076	118.09	28.11	33.6 $\pm$ 2.2	1.74 $\pm$ 0.06	95 $\pm$ 15	0.20 $\pm$ 0.02
	C075	118.32	28.05	34.5 $\pm$ 2.2	1.73 $\pm$ 0.07	10 $\pm$ 10	0.70 $\pm$ 0.15
	C074	118.36	27.94	34.1 $\pm$ 1.6	1.74 $\pm$ 0.05	5 $\pm$ 20	0.25 $\pm$ 0.12
	ST39	119.64	28.90	33.5 $\pm$ 2.7	1.75 $\pm$ 0.07	175 $\pm$ 10	0.65 $\pm$ 0.10
	ST40	119.74	28.80	34.5 $\pm$ 1.8	1.70 $\pm$ 0.05	95 $\pm$ 15	0.25 $\pm$ 0.08
	ST41	119.81	28.72	33.0 $\pm$ 2.9	1.77 $\pm$ 0.08	80 $\pm$ 8	0.35 $\pm$ 0.08

TB: Tectonic Block; H : crustal thickness; κ : Vp/Vs ratio; φ : fast polarization direction; δt : delay time; “-” denotes the station have an uneven and incomplete back azimuthal coverage for anisotropy analysis. Labels are the same as for Figure 1.